



## In memoriam: Dr. Robert Hugh Dunlop

By Dr. Ole Nielsen

Robert Hugh Dunlop was one of the most remarkable Canadian veterinary leaders on the international stage in the last half of the twentieth century. This obituary has been written as a tribute to a dear friend and colleague, who also had a significant impact on my career.

Robert Dunlop landed in Canada in 1949, a 20-year-old immigrant from the UK with little money, a commitment to agriculture and veterinary medicine, self-sufficiency beyond his years and a voracious appetite for life. He had grown up in London the son of a Harley Street physician and a nurse, in a home that valued books, intellectual pursuits, theatre and nature. His home environment and education at University College School for boys inspired a lifetime of intense intellectual activity and a lust to see the world. I have never seen anyone else take as many notes from lectures and seminars. He accumulated a vast store of personal papers that could have fueled a fascinating autobiography given his passion for history. Alas it was not to be as he was felled by Alzheimer's Disease in December 2014, an illness that impaired this brilliant man over the last ten years of his life.

Despite his urban upbringing, that included the London blitz, or perhaps because of it, Bob was attracted to agriculture at an early age. By the time he had graduated from boys school at age 15 (prophetically with distinction in geography, given his later travels) he was committed to a career in agriculture and took up farm employment. Subsequently he won a scholarship to a one year program at the Royal Agricultural College (RAC), now a university, at Cirencester where he topped the class, an academic environment that he would continue to inhabit at OVC and graduate school.


Wherever Bob was employed he attracted responsibility portending his later success in leadership roles. In Canada he first worked on a dairy farm in Ontario, then in the surface mining industry on Vancouver Island. Bob's emigration to Canada and



WCVM's first advisory board and faculty in September 1965. Dr. R.H. Dunlop, who was a WCVM faculty member from 1965 to 1973, is in the back row, far right. *Photo: U of S Archives.*

his admission to OVC in 1951 proved to be but stops on a life time journey that bespoke his intellectual curiosity about the world, its nature, its cultures, its animals. He had an unslakable wanderlust that was complemented by an inherently gregarious personality.

Bob delved deeply in to the opportunities afforded by the Guelph student environment both in and outside the classroom. He was champion sheep showman at the 1952 College Royal in his first year at Guelph, having learned his lessons well working on the RAC farms in the UK. He was a big man and participated in intercollegiate soccer and rugby and intermural sports. He served in the leadership of a campus literary society and acted in plays on campus and in local little theatre; a comparison to Peter Ustinov comes to mind. In an early foray into OVC 56 class politics, where I was among his supporters, Bob's run for class president ended less well than most of his endeavors. His sense of humour was on display when he suggested he would push for free beer for his classmates. It seems a majority our class took itself too seriously and elected his opponent. Bob spent his summers variously in large animal practices in in BC and Ontario, and the Canadian



Officer Training Corps in Shilo, Manitoba, becoming a 2nd Lieutenant in the Royal Canadian Artillery Reserve. One summer he worked passage on a grain freighter from Churchill to Scotland in order to visit his ailing father. At graduation in 1956 he received the Borden Award for his performance with dairy cattle.

Because OVC did not establish graduate programs until 1955 there was no established indigenous graduate student role models to motivate undergraduates to think about an academic or research career. The prevailing culture among students was that “real” veterinarians went into private clinical practice. It probably still does to a lesser degree. Notwithstanding this largely clinical environment, Dunlop set his sights on a career in science and applied for and received an AVMA scholarship to undertake graduate studies in the Department of Physiology and Pharmacology at the College of Veterinary Medicine in Minnesota. This department, led by Alvin Sellers, was particularly strong in ruminant physiology. Here Dunlop launched his academic career that would span a good part of the world.

After completing summer session classes he indulged his wanderlust by touring western Canada visiting classmates who had taken up practice in this region, me among them in Barrhead, Alberta. On a sunny afternoon in early September we sat on a poplar rail fence at an auction market and discussed our new experiences. Bob was enthusiastic about his program and reinforced an inclination to consider graduate studies that I had begun to entertain seriously. For my part I related practice experiences including in particular frustration in trying to treat effectively cattle with grain overload. My encouragement for Bob to study this problem may have had an influence on him since he made it the subject of his PhD thesis research, work that proved to be a classic study of ruminant lactic acidosis. Not long afterwards I wrote Larry Smith asking him to recommend graduate programs in pathology.

Following correspondence with several veterinary schools I decided on Minnesota but not before Bob had assured me its program should be a reasonably good one, especially since graduate students had access to classes from eminent scientists in what was a huge university (40,000 students) compared to Guelph (1,200) at the time. Bob met me at the Minneapolis train station late on a sweltering evening August 1, 1957. He had arranged for me to

stay in the home where he boarded. Although it was midnight we had to listen to a recording of Vaughn William's *Fantasia on a Theme by Thomas Tallis* and comedic songs by Tom Lehrer, a Harvard professor, on modest record player that he had managed to purchase on his meagre income. Also he read aloud some passages in German from Goethe's poem *Erlkonig*, a facility arising from meeting his graduate school foreign language requirement. On my second evening in the USA he introduced me to black culture by escorting me to an earthy night club.

As fellow graduate students and friends we met often. Frequently he joined my wife Marilyn and I for casual suppers. We cut each other's hair. In the late summer of 1958 Bob went to England for a brief visit. He returned quite smitten by love and engaged to Josephine Helyer whom he had known as a youth, now a young woman. He promptly returned to England to claim his bride; surely the shortest courtship I had ever witnessed. Our friendship continued with the new “couple”, but in deference to Josephine, I no longer was given leave to cut his hair.

Bob's research on lactic acidosis required mastery of biochemistry and he was up to the task. His work was seminal in developing an understanding of the pathogenesis of grain overload. He presented his work at the Conference of Research Workers in Animal Disease (CRWAD), *de riguer* for budding veterinary scientists at the time. Like all good scientists Bob haunted the veterinary library and read widely in the medical literature. Shortly before he left Minnesota he called my attention to a recent article describing the use of surgically isolated loops of bowel to study the effects of *Vibrio cholera*. The technique proved to be crucial to completing my thesis work on *E.coli* in pigs and more generally for other scientists studying the pathogenesis of toxigenic enteric colibacillosis.

After Bob received his PhD in 1961, the Dunlops with their two children returned to the UK where he became MRCVS. He joined a large private practice as officer responsible for developing Wickham Laboratories, an extensive clinical laboratory, that continues to the present as a major enterprise. In the process he mastered methodology appropriate to poultry as well as domestic animals. In the early sixties the Cornell College of Veterinary Medicine (CVM) recruited Alvin Sellers and his senior cadre of physiologists *en masse* from the University of Minnesota. Once there Sellers persuaded Bob to join

his former colleagues as an Associated Professor of Pharmacology which he did in 1962.

After Bob left Minnesota I did not see him again until we met in November of 1963 at the CRWAD in Chicago. By then I had completed my PhD and become an assistant professor at Minnesota. Larry Smith was at this meeting and the word was out that he would be the dean of the new college of veterinary medicine that was to be built at the University of Saskatchewan. Both Bob and I made sure he knew that we were interested in joining in this new adventure. And so it happened, we became colleagues at the WCVM. Bob was appointed Head of the Department of Physiological Sciences in the spring of 1964 and took up his appointment a year later in July 1965. I was appointed associate professor in pathology and arrived on site on June 15, 1964. Both of us met with Larry in Saskatoon in May 1964 to plan temporary facilities to launch the teaching program needed in 1965. Bob and I shared a room in student residence and I can recall working with him to draft plans into the wee small hours. About 2 AM I nodded off, the last remember was him still hard at it enthusiastically sketching his ideas for the building.

Bob provided strong forceful leadership to his new department. Despite the paucity of qualified veterinary academics in Canada, Bob pulled together a strong department. He proved to be tough minded in negotiating for resources that he believed were essential for his department. I had been given responsibility for the College's input to planning our new building so we had many vigorous interactions.

The WCVM launched into graduate studies in 1965 along with recruiting its first class. Among Bob's graduate students was Frank Loew, one of Bob's contacts from Cornell (who also became his dear friend). He was given a junior faculty position and responsibility for developing a new course in "correlative medicine" that emphasized pathogenesis, multidisciplinary and independent clinical investigation and discovery by the student. It was an innovative course that bridged the gap between the basic and clinical sciences. It drew on the creativity of many faculty, not the least from Bob, who had an important hand in its conception.

Bob continued his research on grain overload and presented a paper on the subject at the World Veterinary Congress in 1967. In 1969 the WCVM celebrated its establishment, the graduation of its first class, and the dedication of its new building in conjunction with the annual convention of the

CVMA. As part of the celebration Bob chaired a committee appointed to plan a cutting edge symposium to advance understanding of the infectious diseases of man and animals. He and his committee recruited a stellar group of national and international medical scientists as participants. Bob and Harley Moon, faculty member in the Department of Pathology at the time edited the proceedings published as a book "Resistance to Infectious Disease". The preparation and execution for this event went some way to project Bob as a veterinary leader of note internationally.

In late 1970 CIDA recruited Bob to become the founding dean of a new veterinary faculty at Makerere University in Uganda. Despite the ruthless and bloody political turmoil in Uganda, Bob proved to have skills to cope with this scene. He dealt with subsistence farmers at one end of the social scale and President Idi Amin at the other, as well as, university administrators, international aid officials and of course students and faculty. Remarkably he was able to launch the new veterinary program. In 1973 CIDA withdrew its support in response to Amin's antics and concern for the safety of the personnel it supported, *to wit* Bob had his car stolen and was shot at in the process. This was not the first time he experienced this circumstance. During the war a German aircraft had shot at him and a group of farm workers in a field. Bob and Jo and their now six children returned to Canada. The base of the school established by Dunlop was sufficiently robust to survive and today is a very successful institution. It must have been gratifying indeed for Bob to have participated in celebrations in 1997 marking its 25th year where he was keynote speaker.

After the Dunlops returned to Saskatoon, Bob expanded his international experience when he promptly accepted a CIDA assignment to assess the case of supporting the establishment of a new veterinary school in Malaysia. Such a faculty was established with the aid of OVC. Years later Bob taught there for short time.

Later in 1973, Bob was appointed the founding dean of the new School of Veterinary Studies at the also new Murdoch University at Perth, Australia. While he never took up residence in Canada again, he remained a Canadian citizen for the rest of his life. In Perth he had a major role in helping shape this new university, a unique opportunity to exercise his broad perspectives and creativity. In particular he was at pains to assure that the University and the School

would meet the specific needs of the region they served, a principle he would have known successfully guided the first president of the University of Saskatchewan (Walter Murray) when it was established in 1907. I leave it to others who were on the Perth scene to describe the many innovative ideas he fostered and or implemented. It's worth noting he and others fended off an attack to close the school led by individuals who believed too many veterinarians were being produced for the marketplace; not a phenomenon unknown in North America. The first class graduated in 1979. The school has been a success and is fully accredited by the AVMA.

Bob continued to have an active interest in research and supervised four graduate students despite the responsibilities of administration. While in Australia Bob became a Member of the Australian College of Veterinary Scientists in the field of pharmacology and a Fellow of the American Academy of Veterinary Pharmacology and Therapeutics. In 1975 Bob accepted an invitation to initiate instruction in physiology in a two-month program at the new veterinary faculty at The University Pertanian (Agr) in Malaysia. It must have been a contribution of high quality to wit he created rumen fistula in water buffalo to enhance his instruction on digestive physiology.

In 1979 Bob handed off the reins to a colleague and became the Dean of the College of Veterinary Medicine in Minnesota. Here he led a general renewal of the academic and research programs and extensive new building projects. His vision spanned both population- and patient-oriented medicine as well as molecular and ecological science. He secured a funded professorship for Minnesota's program in molecular genetics and financial assistance for computer assisted population health programs that had become of cardinal importance to food animal practice. The recruitment of Roger Morris and Norm Williamson was a strategic coup to support this field. The College was successful in establishing an industry endowed Pomeroy Chair in poultry honouring a faculty member who had magnificently served the Minnesota turkey industry over a life time. Bob's continuing appreciation for veterinary medicine's role in maintaining health in all animal species led to innovative programs dealing with wildlife (e.g. a Raptor Research and Rehab Center). A USDA sponsored external evaluation of research programs at veterinary faculties rated Minnesota

among the top four in the USA. In a wider sphere Bob provided leadership to the veterinary academic community in the USA and Canada by serving as Chair of the Council of Deans of the American Association of Veterinary Medical Colleges in 1983 and the Land Grant College's Commission on Veterinary Medicine which was addressing the emergence of molecular genetics.

International programs continued to receive Bob's attention as the College had programs in Morocco, Uruguay and Thailand. Perhaps Bob's most important contribution to the Minnesota CVM was to provide the leadership necessary to reject a recommendation to close the CVM that had been made by a committee appointed by the senior administration to provide more focus to the University's programs. This arose from lobbying by a group of practicing veterinarians worried about an oversupply of veterinarians similar to the situation he encountered in Australia. The public rallied to support the College and the Board Regents rejected the proposal. The reputation of the University and its President were diminished by this episode. In contrast it demonstrated the wide support for veterinary medicine in the public's mind.

In 1987 as Bob was nearing the end of his third deanship in Minnesota, the University of Guelph awarded him an honorary LL.D. for his contributions to veterinary medicine as part of a convocation celebrating OVC's 125th year. It turned out he still had much more to give.

After serving nine years as Dean, Bob spent his last years at Minnesota from 1988-98 as Professor of Clinical and Population Sciences. While one might expect someone who had been as active as Bob to take it a little easier in his senior years, the opposite was the case. To begin with he participated in clinical rotations in his department. He took steps to refresh his research skills by visiting laboratories in France, UK, Australia and New Zealand. In 1990-91 he spent a sabbatical leave in the Faculty of Medical Sciences in Trinidad-Tobago teaching physiology in the veterinary program using problem based learning pedagogy as well as undertaking a modest research program. In 1991-92 as Director of Continuing Education for the College and working with American Association Bovine Practitioners and the World Congress for Buiatrics he orchestrated a very successful international meeting that was selected by the city of St. Paul as "Convention of the Year". In 1994 he journeyed to the new state of Macedonia as

a volunteer to assist in drafting new legislation to allow privatization of the veterinary profession. It proved a difficult exercise that was disrupted by political turmoil. Undertaking this task must surely again reflect his wanderlust as well as his motivation to serve human society by helping the profession achieve noble societal goals.

Bob was constrained from starting an active research program by lack of appropriate laboratory facilities. If he couldn't create knowledge he could surely analyze and synthesize new understanding based on his formidable intellect, knowledge of the scientific literature, veterinary history and by now vast experience while he was still fueled by abounding energy and motivation. And so he did. The cardinal feature of this segment of Bob's professional life was writing. He authored a text book "Physiology of Small and Large Domestic Animals" in collaboration with Yves Ruckebusch (France) and L. P. Phaneuf (Canada). It was published in 1990 in English and in Spanish in Mexico. With this completed he turned his attention to a truly monumental review of world veterinary history illustrated with extensive period art work and drawings – "Veterinary Medicine: An illustrated History". He wrote the text and collected much of the illustrative material over the period from 1988 until 1995 when it was published with co-author David Williams. The planning for the book began years earlier with Frank Loew who was to have been a co-author. Perhaps Loew stimulated Bob's interest in veterinary history by example when he co-authored a book on the first veterinarian in Western Canada, John Luke Poett. Not surprisingly Bob became involved in a variety of organizations devoted to veterinary history, viz. co-editor with Fred Smithcors of the Journal of the American Veterinary History Society (AVHS) and its president and well as vice president of the World Association for the History of Veterinary Medicine.

In 2000 the Dunlops retired to Bandon, Oregon, to a home in sight of the Pacific Ocean. They had purchased a compact RV and with their beloved Bouvier aboard had toured the western U.S. looking for a place to retire and chose this community. To say Bob "retired" is misleading. He promptly launched into assembling a book on pathophysiology a field which was his first love among his many scientific interests. Through the years this passion had been shared with Yves Ruckebusch in whose laboratory in France he had worked in 1978. The book was

dedicated to him. Knowing I shared a passion for pathogenesis, Bob engaged me in discussing the tentative outline for the book and invited me to write a chapter. While I would dearly have loved to accept I had to recognize that my knowledge of the relevant subject matter was now so dated I had to decline. I marvelled at the fact that he had the drive and the knowledge to undertake such a project. Charles-Henri Malbert, a colleague of Ruckebusch, joined him as co-editor together with 27 authors. The book was published in 2004. It was the last of a long series of remarkable accomplishments his over his 50 year career.

Bob had a strong personality. In light of his achievements it could not be otherwise. He could be harshly critical of leadership that he believed was ill-advised or ineffective. He did not suffer foolish opinions in silence. On the other hand Bob had compassion for his fellow humans and a genuine concern for his friends and colleagues. At an OVC '56 class reunion in 1996 when a classmate suffered a heart attack, Bob was among a very few classmates who stayed at a hospital into the early morning hours to offer support to his wife.

By any standard Bob looms as a Canadian "giant" in veterinary medicine in the last half of the 20th century.

Bob is survived by his wife Josephine (Georgia); children: Robert Hugo Dunlop (Australia), Tasha White (Florida), Lachlan Dunlop (Minnesota), Karma Leyland (UK), Boadie Dunlop (Georgia); predeceased by son Pytt Dunlop in 1991. **WT**